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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,881	01/24/2001	Robert John Tinsley	1322/58	3806

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EXAMINER
NGUYEN, STEVEN H D

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 05/09/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/768,881	TINSLEY ET AL.	
	Examiner	Art Unit	
	Steven HD Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4-11* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 7-9, 16, 22, 25, 27-28, 30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shmulevich (USP 6515985) in view of Glitho (USP 6178181).

Regarding claims 1, 7, 22, 25, 27-28, 30 and 32, Shmulevich discloses (Figs 2-8 and col. 1, lines 10 to col. 14, lines 22) a distributed call signaling message routing gateway comprising a first distributed gateway routing element (Fig 6, Ref 74) including a first interface for sending SS7 call signaling messages to and receiving SS7 call signaling messages from a first SS7 network element (Fig 6, Ref 28) and for performing SS7 routing functions for the SS7 messages received from the first SS7 network element and a second interface for sending the SS7-routed messages over a virtual bus (Fig 6, Ref 76) and at least one second distributed gateway routing element (Fig 6, Ref 78) including a first interface for receiving the SS7-routed messages from the first distributed gateway routing element and a second interface for SS7-routing the received messages to a second SS7 network element (Fig 6, Ref 54) via an SS7 signaling link. However, Shmulevich fail to discloses a step of setting quality of service parameters in the SS7-routed messages sent over the virtual bus. In the same field of endeavor, Glitho discloses (Figs 3-5 and col. 2, lines 5 to col. 6, lines 10) a step of setting quality of service parameters such as TTL and TOS in the SS7-routed messages sent over the virtual bus (Fig 4-5, the signaling message

transmits to the second gateway from the first gateway and setting the quality of service parameters such as TTL and TOS for IP packet).

Since, Shmulevich discloses a QOS management to set packet priorities associated with different service levels offered by the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a gateway with SCCP-IP mapping function which is used to set the QOS parameters as disclosed by Glitho's system into Shmulevich's system. The motivation would have been to obtain a high reliability way to transmit a SS7 message via data network.

Regarding claim 2, Shmulevich discloses the first interfaces of the first and second distributed gateway routing elements include SS7 MTP layer 3 routing functions for routing SS7 messages based on SS7 point codes (Fig 8, Ref 158).

Regarding claim 3, Shmulevich discloses the first interfaces of the first and second distributed gateway routing elements are adapted to route messages based on circuit identification codes (Fig 8, Ref 186 and col. 13, lines 35-49).

Regarding claim 8, Shmulevich discloses quality of service manager processes for setting the quality of service parameters in the SS7-routed messages to be transmitted over the virtual bus (Fig 8, Ref 178).

Regarding claim 9, Shmulevich discloses the first and second distributed gateway routing elements are co-located with the first and second SS7 network elements (Fig 6, Ref 28 and 54).

Regarding claim 16, Shmulevich discloses at least one of the first and second distributed gateway routing elements are co-located with more than one SS7 network element (Fig 2, MSCs).

3. Claims 4-6, 10-15, 17-21, 23, 26, 29, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shmulevich and Glitho as applied to claims 1, 25 and 30 above, and further in view of Krishnamurthy (EP 1054568).

Regarding claims 10-13 and 26, Shmulevich and Glitho fails to disclose the claimed invention. However, Krishnamurthy discloses the first and second distributed gateway routing elements are co-located with service switching points (SSPs); service control points (SCPs); at least one of the first and second distributed gateway routing elements is co-located with a signal transfer point (STP) (Fig 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to place a gateway with SSP, STP, SCP as disclosed by Krishnamurthy's system into the system of Shmulevich and Glitho. The motivation would have been to obtain a high reliability way to transmit a SS7 message via data network.

Regarding claims 4-6, Shmulevich and Glitho fails to disclose the claimed invention. However, The examiner takes an official notice that a first interfaces are adapted to screen the SS7 call signaling messages based on one or more SS7 message parameters; copy the SS7 call signaling messages and forward the copies to a predetermined network monitoring or accounting node; a triggerless number portability process for identifying call signaling messages relating to calls to ported numbers and for overriding the SS7 routing functions for the call signaling messages related to calls directed to ported numbers are well known and expected in the art at

the time of invention was made to apply into the system of Shmulevich and Glitho. The motivation would have been to obtain a high reliability way to transmit a SS7 message via data network.

Regarding claims 14-15, Shmulevich and Glitho fails to disclose the claimed invention. However, The examiner takes an official notice that the first and second distributed gateway routing elements are co-located with a softswitch; an application server are well known and expected in the art at the time of invention was made to apply into the system of Shmulevich and Glitho. The motivation would have been to obtain a high reliability way to transmit a SS7 message via data network.

Regarding claims 17-21, Shmulevich and Glitho fails to disclose the claimed invention. However, The examiner takes an official notice that a translation services module coupled to the first and second distributed gateway routing elements via the virtual bus for translating SS7-routed messages; the translation services module is adapted to perform global title translation services for the SS7-routed messages; directory number to Internet protocol address mapping for the SS7-routed messages; number portability translation services for the SS7-routed messages; the distributed gateway routing elements and the translation services module share a single SS7 point code and function collectively as a signal transfer point are well known and expected in the art at the time of invention was made to apply these functions into the system of Shmulevich and Glitho. The motivation would have been to turn a data network into a signaling network.

Regarding claims 23-24 and 29, Shmulevich and Glitho fails to disclose a OAM server for coupling to the gateways via SNMP interface. However, The examiner takes an official notice that OAM server is well known and expected in the art at the time of invention was made

to apply an OAM server into the system of Shmulevich and Glitho. Since, Shmulevich suggests the SNMP interface being located at the gateway. The motivation would have been to generate an alarm signal etc.

Regarding claims 31 and 33, Shmulevich and Glitho fails to disclose IPV 6 and MPLS protocol for encapsulating the signaling message for transmitting via internet. However, The examiner takes an official notice that IPV6 and MPLS are well known and expected in the art at the time of invention was made to apply these protocols into Shmulevich and Glitho. The motivation would have been to a high reliability way to transmit a SS7 message via data network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (703) 308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Steven HD Nguyen
Primary Examiner
Art Unit 2665
April 29, 2003